FOREIGN CROPS AND MARKETS

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FEATURE ARTICLE

COLONIZATION IN THE ARGENTINE CHACO Reprint
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LATE CABLES

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Australia wheat production in 1935-36 revised to 142,308,000 bushels as against 133,394,000 bushels in 1934-35. (International Institute of Agriculture, Rome, June 18, 1936.)

Canadian crop conditions generally improved during first half of June. More rain and warmer weather needed. Spring-sown crops still backward in parts of several provinces. Growth of wheat in Prairie Provinces slow because of cool weather and limited rainfall but average yields still expected from crop as a whole. Pastures are in unusually good condition and eastern fields have high percentage of clover. The first hay has been cut and a fine return is assured in most sections. May frosts proved less damaging to fruits and berries than was expected. (Dominion Bureau of Statistics, Ottawa, June 16, 1936.)

France grants United States special orange import quota of 10,000 metric tons (315,000 boxes) in addition to small amount already allowed. Licenses for full amount will be distributed within 10 days. (American Embassy, Paris, June 17, 1936.)

Sydney, Australia, wool sales, June series, closed June 18 with restricted demands. Compared with opening of this series on June 15, prices for all well-grown descriptions were unchanged, others tending lower. See page 792. (Agricultural Attaché C. C. Taylor, London, June 18, 1936.)

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C R O P A N D M A R K E T P R O S P E C T S

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BREAD GRAINS

Summary of recent information

The area sown to wheat in Italy for the 1936 crop was somewhat above that of 1935, which was reported at 12,421,000 acres, according to a cable from the International Institute of Agriculture at Rome. In spite of very adverse weather throughout the season, satisfactory results are expected, but production will probably not equal that of 1935, when 283,455,000 bushels were reported. The first production estimate for French Morocco places wheat at 25,426,000 bushels, a gain of more than 25 percent over the crop of 1935. The wheat area of Scotland is expected to be slightly under that of last season, when 101,000 acres were sown, from which was harvested a crop of 4,443,000 bushels. The condition of the current crop on June 1 was somewhat under that of last year on the corresponding date. Both winter wheat and winter rye were in better condition in Lithuania and Estonia than on June 1, 1935, and both crops are reported as good in Belgium. In Latvia and Sweden, winter wheat was average, while winter rye was considerably better in the former but below average in the latter.

The first estimate of the wheat acreage of Turkey was placed by the Belgrade office of the Foreign Agricultural Service at about 7,200,000 acres, a gain of more than 30 percent over the small 1935 acreage. Prospects on May 1 indicated a large crop, the winter having been mild and spring rains abundant. The final figure for the 1935 harvest, as reported by cable from the International Institute of Agriculture, was 92,630,000 bushels as against 99,711,000 bushels reported for 1934. The rye crop was placed at 8,503,000 bushels, a reduction of about 11 percent from the outturn of 1934.

The sowing of Argentine wheat progressing satisfactorily

The sowing of Argentine wheat was probably at its peak the first week of June under conditions considered excellent in the northern half of the wheat zone but somewhat dry in the southwestern part, according to Agricultural Attache P. O. Nyhus at Buenos Aires. Seeding did not start so soon as usual in northern areas, partly because of the mild weather prevailing. It was feared that growth would be too early and too rank before winter set in. About a third of the intended acreage had been sown, and it was thought that sowings would be completed by June 30. In the southern part, dry weather delayed operations somewhat, but not to a significant degree. Perhaps half of the usual wheat acreage had been sown in the southwest, and moisture conditions indicated that all sowings could be finished during the month. Since rainfall in March, April, and May was only 40 to 50 percent of normal, the crop will be more dependent this season upon rains received during the growing period.

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The total acreage sown to wheat in Argentina is expected by many not only to make up for the reduction last year but to exceed the average. Farmers have availed themselves freely of the seed supplied by the Government, and the relatively high fixed price appears to have stimulated interest in seeding wheat.

The Shanghai wheat market

There was no interest shown in foreign wheat at Shanghai during the week ended June 12, because domestic supplies will soon be plentiful, according to a radiogram from the Shanghai office of the Foreign Agricultural Service. Arrivals of new wheat were negligible during the week, however, and were not expected in volume for about 10 days. Flour stocks were low and spot flour prices advanced as a result of the temporary decline in supplies. Futures also increased because of speculation arising from uncertain elements in the general situation.

The weather continued to be cloudy and rainy in the lower Yangtze Valley, delaying harvest operations, but conditions farther inland were somewhat better. Crop reports from North China continued to be good, except for Hopei Province, and the total Chinese crop is still expected to be about 10 percent above that of 1935. The wheat available to the Shanghai mill area will not differ greatly from that of last year, it is thought, but a larger crop in North China may be expected to reduce the flour demand from Shanghai.

Wheat prices, c.i.f. Shanghai, duty and landing charges included, were quoted as follows: Australian 93 cents per bushel, Western White 92 cents. Domestic wheat, spot delivery, old crop, was about 64 cents per bushel, new crop 59 cents. Domestic flour, spot delivery, was 95 cents per bag of 49 pounds, July delivery 88, August and September 87; Australian flour, c.i.f. Hong Kong, $3.25 per barrel of 196 pounds.

Arrivals of flour at Tientsin during May were reported by the United States Consul as follows, with 1935 comparisons in parentheses: From Shanghai 93,000 barrels (340,000), United States 0 (20,500), Japan 8,600 (750), other ports of China 1,400 (0), total 103,000 barrels (361,250). Flour stocks on May 31 amounted to 84,000 barrels, of which 50,000 were imported and 34,000 milled in Tientsin. On the corresponding date of 1935, flour stocks totaled 110,000 barrels, of which 70,000 were imported and 40,000 barrels milled locally. Flour production was approximately 148,000 barrels as compared with 70,800 barrels in May 1935. The average price of domestic wheat for Tientsin was about $1.21 per 100 pounds; wheat flour, ex warehouse Tientsin, Canadian first clear, $4.76 per barrel, Japanese $3.52, Shanghai milled $3.78, Tientsin milled, Grade 1, $4.05, Grade 2, $3.93, Grade 3, $3.75 per barrel.

CROP AND MARKET PROSPECTS, CONT'D

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The rye and maslin situation in the Danube Basin

Approximately 3,805,000 acres of rye and maslin were sown in the Danube Basin for harvest in 1936, according to the Belgrade office of the Foreign Agricultural Service. This compares with 3,919,000 acres sown in 1935 and the 5-year average, 1930-1934, of 4,104,000 acres. The reduction in sowings this season took place in Rumania, where adverse weather conditions were experienced last fall. A slight increase over the acreage of 1935 was reported for each of the other Danube countries. The condition of the growing crop was good in late May throughout the Basin, April and May weather having been generally favorable, but recent heavy rains have caused some lodging in parts of Hungary and Yugoslavia.

The total exportable surplus of rye and maslin in the Danube Basin for the 1935-36 marketing year was estimated at about 1,800,000 bushels. Only about 800,000 bushels were exported from July 1 through May 31, but stocks were greatly depleted in early June. Rye has been substituted for wheat in the diet of many city people this year, and large quantities have been used in Hungary for feed. Consequently, the commercial carry-over into the new season will probably be negligible. Little rye was exported from the Basin in the first months of 1936, but in view of favorable crop prospects for the coming season, export prohibitions were lifted during April in Bulgaria and Hungary. Moderate quantities of rye moved from Bulgaria to western Europe during May, and a small parcel was delivered to Austria by Hungary. Further exports from Bulgaria are expected to be made in June. On domestic markets, offers by farmers increased during May as a result of the favorable crop situation, and rye prices declined in Hungary and Rumania. The Grain Monopoly maintained fixed prices in Bulgaria, however, and no transactions in rye took place in Yugoslavia.

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COTTON

Chinese cotton crop expected to be large

Cotton growers in China are expecting to harvest a crop of approximately 3,000,000 bales of 500 pounds compared with 2,600,000 bales in 1935, provided weather conditions are favorable up to the beginning of the picking season next September, according to information received from Agricultural Commissioner O. L. Dawson at Shanghai. This would represent an increase of 15 percent in comparison with the 1935 crop. Last year's crop was much lower than it was originally expected, due to acreage abandonment resulting from dry weather at planting time in North China and subsequent flood damage in the Yangtze Valley during July. The average crop during the 5 years ending with the 1934 harvest was 2,471,000 bales annually.

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Imports of American cotton from October 1 to April 30 this season have amounted to only 43,000 bales against 78,000 bales in the corresponding period last season. Total imports of cotton in that period were 97,000 bales compared with 143,000 bales the year before. Imports of Indian and Egyptian during the corresponding period have shown slight decreases. Consumption of American cotton during the same 7 months of the current season was the lowest reported since the beginning of October 1931, but still 10,000 bales above the imports.

CHINA: Imports of raw cotton in April 1936, with comparisons
(In bales of 500 pounds)

Growth	1936		October - April	
	March	April	1934-35	1935-36
	Bales	Bales	Bales	Bales
American	4,688	5,316	77,958	42,944
Indian	4,276	29,882	42,450	38,863
Egyptian	1,189	2,117	21,020	15,093
Others	11	61	1,336	355
Total	10,164	37,376	142,764	97,255

Arrivals of native cotton at Shanghai have been very heavy. While during October-May 1935 preliminary Shanghai arrivals were estimated at 562,479 bales, during October-May 1936 this figure increased to 962,477 bales, an increase of 400,000 bales. On the other hand, arrivals of American cotton declined from 98,195 bales to 39,868 bales; Indian practically retained last year's position and Egyptian showed a slight decrease.

CHINA: Preliminary arrivals of raw cotton in May 1936, with comparisons
(In bales of 500 pounds)

Growth	1936		October - May	
	April	May	1934-35	1935-36
	Bales	Bales	Bales	Bales
American	6,370	1,200	98,195	39,868
Indian	36,181	18,720	63,762	62,581
Chinese	128,541	134,536	562,479	962,477
Egyptian	1,539	1,964	22,271	16,534
Others	4,677	3,704	3,057	8,381
Total	177,308	160,124	749,764	1,089,841

CROP AND MARKET PROSPECTS, CONT'D

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Present stocks of native cotton and those to arrive during the remainder of the season, in addition to the arrivals of a small volume of foreign cotton, are expected to supply the Shanghai mill requirements. It is estimated that about 60,000 bales of native stocks are of poor spinning quality. It does not appear that there is sufficient cotton for the remainder of the season at points outside of Shanghai, should the present rate of activity continue. There are some indications, therefore, that mill activity in the interior may have to be reduced pending arrival of the new-crop cotton. Deliveries to Shanghai mills in May were 86,000 bales below those of April, while the total mill deliveries in Shanghai during October-May 1936 were 1,007,000 bales as against 649,000 bales during the similar period of 1935.

Prices of domestic and foreign cotton advanced during the month, but native cotton did not rise proportionately. Indian cotton registered the largest increase, but the disparity between the price of the latter and American cotton is still very considerable.

CHINA: Price per pound of specified grades of cotton at Shanghai, June 12, 1936, with comparisons

Growth	1936	
	May 14	June 12
	Cents	Cents
Domestic cotton (July delivery).....	11.50	a/ 11.98
American middling (Immediate delivery).....	15.66	16.29
Indian akola (Immediate delivery)	11.55	12.63

a/ August delivery.

The value of piece goods imports during April 1936 amounted to $530,281 as against $1,463,549 in April 1935. The total value for October-April 1936 was $4,255,000 compared with $9,033,000 for October-April 1935. Exports of piece goods in April were valued at $276,932 against $132,025 during the same month of 1935.

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FRUITS, VEGETABLES, AND NUTS

Danube Basin anticipates larger prune exports

Approximately 50,000 short tons of dried prunes probably will be available for export from the Danube Basin in 1936, according to Louis G. Michael, Agricultural Attache at Belgrade. This quantity represents a sharp increase over the total net exports of 26,619 tons in 1935 from Yugoslavia, Bulgaria, and Rumania. A heavy crop of prunes is expected

CROP AND MARKET PROSPECTS, CONT'D

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because of unusually favorable weather conditions prevailing in the Danube Basin during the winter and spring. Present prospects indicate a production of about 803,000 short tons of fresh prunes, as compared with 453,000 tons produced in 1935, and an average of 610,200 tons during 1930-1934. Probably 200,000 short tons of fresh prunes will be exported, as compared with 122,603 tons exported in 1935. A considerable part of the crop will be used for distillation and for prune jam.

Nova Scotia apples suffer serious frost damage

Frosts during the last 10 days of May did considerable damage to apple trees in the Annapolis and Cornwallis Valleys of Nova Scotia, Canada, according to a report from Vice-Consul Robert Jakes at Yarmouth, Nova Scotia, in which he quoted the Halifax Herald. The crop was reduced about 20 percent, states the report. Four frosts occurred, the most serious being on the morning of May 27. Damage from the last frost ranged from 10 to 95 percent in the vicinity of Kentville. Late varieties such as Ben Davis and Northern Spy suffered the most, according to the Nova Scotian Department of Agriculture. Since no estimate has yet been made of the crop, the loss cannot be measured quantitatively.

World production and exports of oranges

The world production of oranges is roughly 185,000,000 boxes, of which about 25 percent finds its way into export channels. Oranges are widely produced in semi-tropical countries and those countries which lie in the warmer parts of the Temperate Zones. The principal producing countries of the world are the United States, Spain, Japan, Brazil, Italy, China, and Palestine.

There are two clearly defined seasons for orange production, the winter season, which starts in the fall and terminates in the spring, and the summer season, which starts in the spring and ends in the fall. About two-thirds of the world's orange crop is produced in the winter months. The United States has a substantial production of both winter and summer oranges. The Florida crop and the Naval orange crop in California are winter oranges, and the California Valencia crop is considered as summer oranges. Winter oranges are produced largely in the countries located in the Northern Hemisphere, and, with the exception of the California Valencia crop and a rather small share of the Spanish orange crop, summer oranges are produced in countries of the Southern Hemisphere.

The world production of oranges is on an upward trend. Crops are increasing rapidly in the United States, Palestine, Brazil, and the Union of South Africa, to mention the most important, but the upward tendency has been offset to a considerable degree by smaller crops in Spain and Italy. The increasing world production has been accompanied by an improvement

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in quality in the packaging of oranges. Present information indicates that in years of generally good crops a decade from now the total world production may reach 240,000,000 boxes.

Orange production in the United States has increased in the last 27 years (since the Census of 1909) at the rate of, roughly, 2,000,000 boxes a year. The increase in the last few years has been even more rapid, production averaging 52,500,000 boxes in the last 5 years. Taking the present non-bearing orange trees into consideration and barring heavy abandonment and neglect, the total United States orange crop in years of favorable weather conditions may reach 80,000,000 boxes before the end of the next decade. Out of the average of 52,500,000 boxes produced in the last 5 years, California supplied 68 percent and Florida 31 percent. The balance of less than 1 percent was grown in Texas, Arizona, Alabama, Louisiana, and Mississippi. In recent years, citrus production figures have been more detailed and, consequently, it is possible to divide the orange production into at least two parts, winter and summer oranges. Out of the average production of 55,000,000 boxes in the 3-year period 1933 to 1935, winter oranges made up 34,000,000 boxes and summer oranges 21,000,000 boxes.

Although the United States is the largest orange producer, Spain is by far the most important exporter of oranges. Located so near the great European consuming centers, Spain has built up a large orange export trade. In most years over half of the orange shipments entering into commerce originate in Spain. In the last 5 years, world trade in oranges has averaged about 46,000,000 boxes per year. Orange exports are increasing rapidly from Palestine, Brazil, and South Africa, and an upward trend seems to be indicated for the United States. Increasing exports from the countries mentioned have been offset somewhat by smaller shipments from Spain and Italy. This decline, however, is probably of a temporary character since there has been considerable top-working of trees to better varieties and replacement of unsatisfactory trees in the groves of these countries. With the increasing world production, exports may reach 60,000,000 to 70,000,000 boxes within the next 10 years.

Exports of strictly summer oranges have shown a sharp rise in the last few years, since shipments from the United States, Brazil, South Africa, and other summer orange producing countries have been increasing steadily. Total exports of summer oranges have not reflected this increase, however, since shipments from Spain which extend beyond May 1, the date which is generally conceded as the start of the summer-orange season, have been declining. The United States, Brazil, South Africa, and Spain are the chief sources of supply during the summer-orange season. At the present time the world production of summer oranges is around 55,000,000 boxes, of which about 14,000,000 boxes move into export. See F.S./CF-88, Statistics Relating to the Orange Industry, June 1936.

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LIVESTOCK, MEAT, AND WOOL

World slaughter supplies of hogs tending upward

Hog slaughter in Germany and Denmark, the two leading European hog-producing countries, probably will increase somewhat in the remainder of 1936, according to information available in the Foreign Agricultural Service. In Germany, however, slaughter has been curtailed considerably in the last 6 months, and in Denmark, despite the expected increase, slaughter for all of 1936 probably will be smaller than in other recent years except 1935. A substantial increase in hog marketings in the Danube Basin in the last half of 1936 also is indicated. In the last year, exports of hog products, chiefly lard, from the Danube Basin have increased greatly, with most of such exports going to Germany.

Slaughter supplies of hogs in the United States will continue well above the levels of a year earlier in the remainder of the 1935-36 hog-marketing year ending September 30,1936. The movement of hogs to market in May and early June apparently was delayed somewhat by the feeding of hogs to heavier weights. In view of the large increase in the 1935 fall pig crop, however, it is expected that a larger than usual proportion of the summer (May - September) slaughter supply will be marketed after mid-June. The relationship between hog prices and corn prices in the last 6 months has been very favorable for a further expansion of hog production in this country. Although definite information as to the size of the 1936 spring pig crop will not be available until the release of the June 1936 Pig Crop Report, it seems probable that there was a material increase in the spring crop this year. The high hog-corn price ratio of recent months also indicates some increase in the 1936 fall pig crop, but fall farrowing will be affected to a considerable extent by the outturn of the 1936 corn crop. See HP-79, "World Hog and Pork Prospects", June 1936.

Anglo-Danish agreement extension retains pork quotas

Extension of the Anglo-Danish trade agreement, which expired on June 20, retains the present British import quota system for cured pork, according to cabled advices from the American Embassy at London. The extension provides also for the continuation until the end of 1936 of the duty-free status of such imports, and for the allocation of at least 62 percent to Denmark of the foreign cured-pork supplies admitted under the quota. It is understood, however, that the British Government probably will impose an import duty on cured pork, effective on or after January 1, 1937, and that cured-pork quotas will be continued, probably with modifications.

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Larger Danube lard output in prospect

Farmers' intentions reports for Hungary as of April 1, 1936, indicate an increase of 37 percent over 1935 in the numbers of lard hogs to be finished for market in the period April-September 1936. The Belgrade office of the Foreign Agricultural Service reports also that the number of meat-type hogs on feed in the same period is expected to show an increase of 9 percent in the same period. The intentions reports suggest a substantial increase in marketings during the fall and winter of 1936-37 over comparable 1935-36 figures. For the period April-September, however, the decline in the monthly rate of marketings anticipated by the Belgrade office appears to be materializing, following the unusually large sales made in the period January-March 1936. Lard exports from the Danube Basin in the 2 months April-May 1936 were maintained at a monthly rate below that of the 3 preceding months. Total exports for the 2 recent months, at about 13,000,000 pounds, however, were about 53 percent larger than in the corresponding months of 1935. For the first 5 months of 1936, total lard exports reached about 34,800,000 pounds, an increase of 24 percent over 1935.

Switzerland importing American lard

The importation of 110,321 kilograms (243,214 pounds) of lard into Switzerland has been authorized since February 15, 1936, the effective date of the trade agreement between the United States and Switzerland, according to the American Consul at Bern. Of the amount authorized, all had been admitted by May 28, and all of the imports were of American origin. United States shippers were guaranteed by the trade agreement at least 90 percent of the authorized amount of imports. That provision, however, was not to become effective until May 15, or 3 months after the agreement became effective. The Consul reports that it is the policy of the Swiss Government to allow as large an importation of lard from the United States as is possible, taking into consideration the domestic situation. So far there are no indications as to how large future imports may be.

Under the terms of the agreement, the Swiss Government agreed to lift its virtual embargo on imported lard by May 15. According to official monthly import figures, however, it appears that Switzerland has been allowing the importation of lard at least since February 15, as 220,901 pounds are recorded as having been imported in the months February-April. This suggests that, of the total of 243,214 pounds received to May 28, 22,113 pounds were received during May. The Swiss import duty on lard was reduced 50 percent by the agreement, the present rate being about 3 cents per pound.

British wool prices and textile production fairly well maintained

Prices established at the May series of London wool sales were slightly under the March levels, according to Agricultural Attaché C. C.

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Taylor at London. The May prices of merinos, however, were higher than the January prices, and prices of lower qualities practically equaled the January figures. Bradford quotations for oil-content tops remained practically unchanged from mid-April until the time of reporting on June 6, but all qualities were valued at higher levels than a year ago. The recent range of prices was in line with the temporary peak in 1933-34, which marked the highest position for tops since 1929. The persistent rise in prices of coarser wools has tended to reduce the spread between fine and coarse wools, but the spread continues abnormally wide.

British imports of raw wool in the first 4 months of 1936 were considerably larger than those of a year earlier, and were almost as large as in the corresponding 1934 period. The 1936 net imports were larger than in either of the 2 preceding comparable periods. Stocks on May 1, 1936, however, were smaller than on that date in 1935 and were much smaller than on May 1, 1934. The 1936 import figures represented a continuation of the heavier movement in the calendar year 1935, when gross and net imports amounted to 864 million and 525 million pounds, respectively. The corresponding 1934 figures were 789 million and 484 million pounds. The 1935 movement was marked by smaller takings of Australian wool by Japan, and correspondingly larger takings by the United Kingdom.

The greater mill activity of 1935 and earlier 1936 has been retarded somewhat in recent weeks. Employment in April, however, compared favorably with most of 1935, and was almost as high as in the active period in the last quarter of the year. British retail trade in wool products was smaller in April this year than last, but stocks also are smaller than a year ago. The export movement, however, has been definitely larger so far in 1936, the total value for the first 4 months being 2 percent above the 1935 level and 8 percent above the comparable 1934 figures.

Sydney wool sales open with prices low

The June series of Sydney, Australia, wool sales opened June 15 with a miscellaneous selection, according to Agricultural Attaché C. C. Taylor at London. Continental European and Yorkshire buyers were active bidders, with local mills also giving support. Competition was good for all well-grown descriptions. Bidding for other sorts was irregular. Compared with the closing of the preceding series on March 13, prices for well-grown merinos were 5 percent lower, average qualities 10 percent, and inferior 15 percent lower. Crutchings were unchanged and crossbreds not quoted.

COLONIZATION IN THE ARGENTINE CHACO a/

At the present time, approximately 90 percent of the cotton crop of Argentina is produced in the Territory of the Chaco. The annual production of cotton in this Territory has not exceeded 275,000 bales of 478 pounds, but private and governmental agencies predict a continuous expansion of cotton growing in this region. Expansion depends so largely upon the success of colonization work and a larger population that an examination of the colonization movement may be helpful in appraising the future expansion of cotton growing in this relatively new and undeveloped region of the Argentine.

The Argentine Chaco has an area of 40,000 square miles, or equal that of the State of Ohio, and is located in the north-central part of the Republic. It constitutes a part of an extensive natural region of flat country, characterized by tracts of timber, prairie, and swamp land. The natural vegetation differs sharply from that of the cereal and cattle zone of the Argentine, which consists of prairie land and is almost entirely devoid of trees excepting where settlers have planted them. Climatic conditions are semi-tropical and, as in the cereal zone, the annual rainfall decreases sharply from the eastern to the western side of the Territory. At Resistencia on the eastern side the average annual rainfall is 49 inches. The limit of cotton growing without irrigation is about 160 miles to the west, where the average annual rainfall is 32 inches. The latitude of the central part of the Chaco corresponds to that of southern Florida.

For fully 200 miles south of the Chaco boundary in the Province of Santa Fé, the country is very thinly settled and probably has better farming possibilities than the Chaco. Interest in colonization in the Chaco and in the adjoining regions of Corrientes and Formosa arises from the fact that land in the Province of Santa Fé is already in private hands, whereas in the Chaco, Corrientes, and Formosa the greater part of the land is owned by the Government and is being made available to settlers in small tracts at low prices and under easy terms of payment. Parts of Corrientes, it is stated, are fully as promising tracts as the Chaco; but, whether due to the opening up of the Chaco by the railways, greater availability of land for colonization, better governmental administration, or other factors, colonization seems to be centered in the Chaco. Colonization work in the Chaco was started only about 10 or 12 years ago, and Formosa on the north is as yet beyond the frontier.

Attraction of low-priced land

Families have gone to the Chaco practically empty handed, and it is stated that more than half of the cotton crop is being produced by

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a/ By Paul O. Nyhus, American Agricultural Attaché, Buenos Aires.

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these squatters, without land contracts or any legal status other than the possession of a permit to reside temporarily on the land. To become owners of the land it is necessary to enter into a land contract which provides for annual payments. So few farmers have these "provisional titles" and payments in the cases of whose who have are so delinquent that probably 70 percent of the farmers in the Chaco have been farming without paying rent, taxes, or installments on the land.

The influence of what to date has been almost free land, available in lots of 25 to 100 hectares (62 to 247 acres) is further illustrated within the Chaco itself. Some of the best lands in the southern part of the Chaco were acquired in large tracts by private owners prior to 1903 and, although there are instances where large landowners have subdivided their lands and have undertaken to colonize them, colonization has made little progress on these private projects. Prices asked for privately owned land are somewhat higher than those for Government land, but, what is more significant, settlers have occupied Government land as squatters with no necessity to make even small payments for several years.

In the cereal zone prior to about 1905, it was possible for Danish and other immigrants from northern Europe to go through the successive stages of being farm hands, tenant farmers, and finally, landowners, but during the past 30 years the opportunities have been small even for northern Europeans with admittedly higher ambitions and standards than the Italians and southern Europeans who make up the present tenant farmers in the cereal zone. To start farming in the cereal zone even as a tenant requires $1,500 to $2,000 to buy horses, machinery, equipment, and supplies. For a tenant to become a landowner is extremely difficult because of high land prices, the prevailing large size of holdings, and the infrequent opportunity of securing tracts of 100 hectares or less. Some of the most successful farmers in the Chaco at the present time are former tenant farmers in the cereal zone who took up land in the Chaco about 1924.

Characteristics of settlers

The Chaco has attracted a great variety of people in respect to nationality, training, and standard of living. In the cereal zone, there are many foreign-born farmers and a great number of colonies of tenant farmers, each composed largely of people of one nationality. In the Chaco the racial variety is more noticeable because farms belonging to Czechoslovakians, Spaniards, and Russians are side by side, and many nationalities are represented in a relatively small zone. Italian farmers, who predominate in the cereal zone, are here almost absent. Czechoslovakians are especially prominant; and, although people of Spanish stock are more numerous, the Czechs grow a substantial part of the cotton crop. There are also Russians, Yugoslavs, Bulgarians, and

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Austrians in considerable numbers. In the town of Roque Saenz Pena, each of these nationalities has a meeting place where some of their national customs are preserved and fostered.

Families have gone to the Chaco with a desire to work on the land but with little or no farming experience. To a considerable extent, men who formerly were miners, factory workers, laborers, shoemakers, and shepherds are the cotton growers of the Chaco. Unequipped by training and experience as these people were when they settled in the Chaco, their difficulties have been correspondingly great. Their inexperience also partially explains the poor cultural practices and lack of good farming methods which characterize cotton growing in this region. Some settlers might have raised wheat and other grains, but few, if any, had had any experience with cotton growing prior to coming to the Chaco.

The construction of a "rancho", or hut of one or two rooms in the center of a clearing, is the settler's first task. This adobe mud house is reinforced by a skeleton structure of poles and has dirt floors and a few small windows. In the cereal zone, these houses are usually whitewashed, both on the interior and exterior, but this practice is rare in the Chaco. Food is generally ample, but living standards are low and reflect little evidence of prosperity resulting from cotton growing. The development taking place in the Chaco at the present time has been compared with land settlement in western Texas 50 to 60 years ago, but probably at no time in pioneer days in the United States were living standards quite so low as they are, generally, in the Chaco. Living conditions, however, are superior to those to which immigrants are accustomed and, in addition, there is an opportunity to acquire land.

Germans have pointed out that northern Europeans find the climate of the Chaco trying, but Czechs, Bulgarians, and Yugoslavs work in the midday summer temperatures and appear to resist the heat successfully. The character and scantiness of social life in rural communities are the most noticeable defects of Argentine country life, and they are intensified in the Chaco by pioneer life, variety of nationalities, and poverty. It seems, therefore, that climatic and living conditions have practically eliminated the nationalities of northern Europe as successful colonists in the Chaco.

The living standards of the farmers in the Chaco do not reflect much prosperity, as indicated above, but emphasis upon public schools is probably greater in the Chaco than in the cereal zone of the Argentine. The schools are too few for the number of pupils and the equipment is meager, but schooling is nevertheless being provided. The children travel relatively long distances in sulkies and on horseback.

COLONIZATION IN THE ARGENTINE CHACO, CONT'D

Administration and sale of Government lands

Prior to 1903 there were no restrictions placed upon the amount of land in the Chaco which an individual could purchase from the Government, and some of the large private holdings in the southern part of the Territory, consisting of as much as 40,000 hectares (98,000 acres), were acquired prior to that date at 5.00 to 7.00 pesos and less per hectare ($0.87 to $1.20 per acre at the exchange rate prevailing from 1899 to 1903). In 1903 sales to any one individual were restricted to 2,500 hectares (6,178 acres). Prior to January 15, 1924, when individual purchases of farming land were restricted to 100 hectares (247 acres) and of pasture land to 625 hectares (1,544 acres), about 25 percent of the land in the Chaco had been disposed of to large landowners for grazing purposes. These lands represented the most accessible parts in the south and southeast of the Territory. The passage of the 1924 legislation restricting purchases of land in agricultural colonies to 100 hectares also initiated a more active colonization policy in respect to subdivision of the land and encouragement to colonists.

Twelve years have elapsed since the adoption of policies and measures to subdivide the land into agricultural and grazing lots, but the undeveloped character of the country is reflected in the fact that 45 percent of the Territory remained entirely unsurveyed at the end of 1934 and only 10 percent was included in agricultural colonies subdivided into lots of 100 hectares or less. Some of the land has been surveyed into grazing lots of 625 hectares, but on the bulk of the surveyed land owned by the Government only 10-kilometer lines have been run, which are comparable to township and range lines in the United States. The unsurveyed tract, to which reference has been made and which is sometimes designated as unexplored land, consists of the northwestern portion of the Territory and is probably the least useful for agricultural purposes. Settlement and cotton growing have preceded the actual subdivision of the land in many localities; and, although a farmer is permitted to work land which is not subdivided, no provisional titles can be issued until the lands have been surveyed.

The records of the Land Office at the end of 1934 indicate that about 70 percent of the Chaco consists of Government lands. The classification in respect to ownership is as follows:

	Acres
Sold on contract -	524,356
Privately owned -	7,215,794
Government owned -	17,328,967
Total area -	25,069,117

The agricultural colonies, comprising about 10 percent of the area of the Chaco, are selected areas of the most accessible, well-drained tracts. They have for the most part silt loam soils of apparently high

COLONIZATION IN THE ARGENTINE CHACO, CONT'D

fertility. Cotton has been grown continuously on some of the soils for the past 13 years. Most of the colonies are subdivided into 100-hectare lots, as it is contended that few settlers use more than 50 hectares effectively.

The provisional titles, or the land contracts by which the settlers acquire final ownership, which were issued some years ago, provided for complete payment for the land in 6 years, but the period of payment has been extended to 10 years. There are no interest charges. Present prices vary from 33 pesos to 61 pesos per hectare (about $4.40 to $8.15 per acre), depending upon the location of the land in respect to the distance from a railway line. The lower price applies to land 30 miles or more from the railway. The conditions of payment provide for 1.5 percent of the sale price upon receipt of the provisional sale ticket, to cover costs of surveying and recording; 5 percent of the sale price at the end of each of the first 2 years; 7.5 percent at the end of each of the next 2 years; and 12.5 percent annually for the remaining 6 years. The 12.5-percent annual payments are equivalent to $0.55 per acre for land priced at 33 pesos and $1.02 per acre for land priced at 61 pesos. The quebracho trees of this region are sources of considerable income; and, if a piece of land is well timbered, 10 or 20 percent may be added to the base price. There is provision also for a reduction up to 30 percent on such parts of the farm as may be swamp land. Colonists having only provisional titles are not permitted to take off any timber. A settler is also required to build a house and to cultivate a designated acreage.

Upon completion of the payments on the land, final titles are issued, but farmers who have acquired final titles are very few. The data which follow indicate the status of ownership of land in the agricultural colonies at the end of 1934 and reveal that final titles have been issued on about 11 percent and provisional titles on 27 percent of the land in the agricultural colonies.

	Acres
Final titles issued -	180,294
Provisional titles issued -	462,739
Available for sale -	1,076,172
Present area of agricultural colonies -	1,719,205

These statistics tend to support the estimate of a well-informed cotton grower that probably 70 percent of the farmers in the Chaco have neither provisional nor final titles to the land which they are working. Squatters on tracts which have not been subdivided cannot, of course, be given provisional titles, but it is believed that settlers occupy most of the agricultural colonies and hope to secure land contracts. It is stated that after the application for a provisional title the colonists are under observation by local representatives of the Land Office to determine their industry, honesty, and other qualifications for ownership.

COLONIZATION IN THE ARGENTINE CHACO, CONT'D

The fact that more farmers have not secured final titles is in most cases due to failure to complete payments. On some of the land for which provisional titles were issued some years ago, the original period of payment has expired and new agreements have been made to enable these men to acquire final titles. The records of payments made by colonists having provisional titles show annual payments varying from a few pesos to several hundred pesos. The Land Office has not insisted on annual payments, since most of the colonists come to the Chaco without funds and the returns from their crops during the first 5 or 6 years are used in making improvements on the land and in buying horses, machinery, and other working capital. It is said that some farmers have the means to complete payment on the land but have not done so in order to avoid payment of taxes to which they will be subject when they secure final titles. There have been boundary disputes in other cases, particularly where settlers have taken up land prior to the subdivision of the tract.

Although the matters of completing records and settling disputes apparently have been handled slowly, the declared purpose of the Government to enable colonists to become owners of the land is clear. There is no evidence of dispossession by the Government because of failure to comply with the provisional titles with respect to annual payments, and colonists are confident that, if they work their land, delays and red tape in connection with provisional and final titles will be solved eventually in their favor.

The fact that few farmers have final titles to their properties may explain the failure of the Territory to show more prosperity than it does. Plans for building new homes and for making improvements are delayed until the matter of titles is cleared up. One of the very successful cotton growers near Saenz Pena, whose 1935 and 1936 cotton crops each exceeded 14,000 pesos ($4,600) in value, continues to live in the "rancho" which he built when he settled on his land in 1924 prior to the subdivision of the land by the Government. His final title has been in dispute for several years and he has delayed rebuilding. In the absence of provisional or final titles, some of the settlers, no doubt, will leave the Chaco when cotton prices decline. It is stated that following the decline in prices in 1926 and 1927 people left the Chaco in large numbers.

Resources and limitations

The present Governor of the Chaco recently made a trip to the United States and was especially impressed with the data and maps available in the United States on land utilization. Immediately upon his return, he organized a similar census and survey of land resources and utilization in the Chaco. Until these data have been compiled and published, it is only possible to make some broad generalizations as to the adaptability of the land in the Chaco and the tendencies in colonization. It seems quite apparent that the best land for cotton growing is located in the central part of the Territory. It is significant that about 75 percent of the

COLONIZATION IN THE ARGENTINE CHACO, CONT'D

cotton crop of the Chaco is grown in a central zone about 85 miles wide and 130 miles long. There is much low, swampy land on the eastern side of the Territory, and scant rainfall makes the western third of the Territory unsuitable for rain-grown cotton. In describing the cotton zone, many place the western boundary at the railway line extending from Avia Terai to Anatuya Close to Charata on this railway line, the corn acreage is larger than that of cotton. Because of rainfall conditions and lowlands, half of the Territory may be considered relatively unfavorable for cotton growing.

It would seem, therefore, that colonization and cotton growing will be concentrated to a considerable extent in a zone running north and south through the center of the Territory. About 50 miles of railway line running northwest of Saenz Pena has already been completed and will speed up colonization in what is considered a good cotton district. Colonization no doubt will be concentrated in the north, where Government lands are available, since in the southern part of this central zone colonization is restricted by the private ownership of large tracts for grazing purposes. It would seem that the region fairly well adapted to cotton growing possibly includes 7,400,000 acres. In this zone the present cotton area is about 556,000 acres.

Included in this central zone is considerable timber land, and tracts having more than 50 percent in timber are still reserved as Government lands. Also, colonists having only provisional titles are not permitted to take off any timber. Pioneering in this region, therefore, has not consisted in felling trees and pulling stumps, but in the cultivation of the plains and of clearings already made in the timber. To date there has been no need to enlarge the cultivated area by pushing back the timber line; but, when less open land is available than at present, timber land probably will be cleared. The procurement of final titles, however, is an almost indispensable condition of such laborious and costly means of extending the cultivated area.

Some people in the Chaco are of the opinion that the best lands have already been colonized. Certainly the most accessible have been, but railway construction is opening up new tracts and subdivision by the Land Office, although proceeding slowly, is making other tracts available to settlers. Apparently the land in the Chaco is very inadequately utilized. The cotton fields scattered here and there represent a small fraction of the land area, and, with sufficient settlers and labor to bring about complete and intensive utilization of the farming resources, cotton production could be greatly increased.

Something has already been said of the apparent greater adaptability of corn than cotton in the western part of the Chaco. In the central zone previously described, however, and also on the eastern side of the Territory where the land is not too low for cultivation, the comparative advantage of cotton over corn is considerable. A small amount of sunflower seed is grown, but little else of any importance. In the Saenz Pena

COLONIZATION IN THE ARGENTINE CHACO, CONT'D

district, the corn acreage is about one-third of the cotton acreage. This relatively large corn acreage is due to the necessity for producing feed supplies locally. Some farmers contend that they would do better by diversifying their crops and that so little corn and feed crops are grown that there are insufficient feed supplies for work animals. At present, there is a demand for corn for feeding purposes, but the price is not on an export basis similar to that in most of the Argentine. Other farmers point out that if corn production were expanded enough to create a surplus in the Chaco over and above feed requirements, the returns from corn would be still less and the comparative advantage of cotton over corn even greater. Colonists are urged to grow more vegetables and other food items, and, in general, diversification and a greater degree of self-sufficiency is advocated as a means of improving both the farming organization and the standard of living.

Pickers for the cotton harvest in the Chaco move in from all sides, Indians from Corrientes coming in largest numbers. Entire families move in for the cotton-picking season, living with little more than a covering over their heads. With average pickings of 110 to 130 pounds of unginned cotton per day, at the present price of 60 centavos per 10 kilograms (less than a cent a pound) a good picker earns 3 to 4 pesos per day ($0.99 to $1.30 per day). To date, the labor supply seems to have been adequate, but it is feared that continuous expansion in cotton growing may seriously tax this supply.

Restriction of immigration

Statistics for 1934 and 1920 relating to the Chaco indicate a population in 1934 of 214,000, which compares with 61,000 in 1920. The farm population of 30,000 in 1920 has quadrupled during the period and the cultivated area has increased from 84,000 acres in 1920 to 951,000 acres in 1934.

Authorities in the Chaco point to these statistics as indicating the progress that is being made but contend that colonization would be more rapid if the Argentine immigration policy in force since 1930 were liberalized. According to the 1930 regulations, immigrants must have 1,000 pesos ($330) upon entering the country. Partly as a result of this measure, the immigration movement into the Argentine since 1930 has barely exceeded the emigration movement out of the country. An annual increase in population of 154,000 to 180,000 is attributed to the excess of the birth rate over the death rate. Argentineans interested in the development of the Chaco have advanced an immigration policy of a selective character. They are in favor of a policy whereby Argentine Consuls located in the south-central countries of Europe would select colonists for the Chaco. It is argued that by a selective process of this nature, good European farmers could be secured who are capable of making a success of cotton growing and farming under the difficult climatic and social conditions existing in the Chaco.

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AUSTRALIA: Wheat acreage and production, 1930-31 to 1935-36

Year	Acreage	Production
	1,000 acres	1,000 bushels
1930-31	18,165	213,594
1931-32	14,741	190,612
1932-33	15,766	213,927
1933-34	14,901	177,338
1934-35	12,544	133,394
1935-36	11,945	142,308

International Institute of Agriculture and official sources.

DANUBE BASIN: Acreage sown to rye and maslin, by country, average 1930-1934, annual 1935-1936

Country	Average 1930-1934	1935	1936
	1,000 acres	1,000 acres	1,000 acres
Bulgaria	801	615	642
Hungary	1,601	1,547	1,557
Rumania	a/ 941	a/ 961	803
Yugoslavia	761	796	803
Total	4,104	3,919	3,805

Belgrade office, Foreign Agricultural Service
a/ Acreage harvested.

MOROCCO: Production of specified grains, 1931-1936

Year of harvest	Wheat	Barley	Oats
	1,000 bushels	1,000 bushels	1,000 bushels
1931	29,783	59,030	1,654
1932	27,970	47,146	1,267
1933	28,902	50,406	1,883
1934	39,586	69,823	1,894
1935	19,999	35,807	1,061
1936	25,426	62,647	1,722

International Institute of Agriculture, Rome.

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